

THAT WHICH IS CLAIMED IS:

1. A method of scaling images continuously on a display comprising the steps of:

- displaying video data generated as a video data stream on a video display at a predetermined aspect ratio;
- during playback or in a pause mode, obtaining video source values of pixel width and pixel height to be displayed;
- determining the smallest integer increment on the x/y axis that will maintain the desired aspect ratio by using a greatest common denominator to reduce the ratio to the lowest integer.

2. A method according to Claim 1, and further comprising the step of generating a video data stream from an optical disc player.

3. A method according to Claim 1, and further comprising the step of generating a video data stream as a High Definition Television (HDTV) signal.

4. A method according to Claim 1, and further comprising the step of manipulating a joystick for initiating a zoom function to scale images of the video display.

5. A method according to Claim 4, and further comprising the step of moving the joystick up to increase zoom magnification by a predetermined number of pixels and moving the joystick down to decrease zoom magnification by a predetermined number of pixels until fully zoomed out.

6. A method according to Claim 5, and further comprising the step of manipulating a second joystick to vary the x/y position of the zoomed region in a continuous fashion.

7. A method according to Claim 1, and further comprising the step of displaying the video data on a video display that is operatively connected to a video game box containing an optical disc player,  
5 a central processing unit, a graphics processor unit, and game port.

8. A method according to Claim 1, and further comprising the step of processing the video data such that a zoomed rectangle retains its perspective in relation to the video source values to  
5 minimize jitter/"bob" effects.

9. A method according to Claim 1, wherein if zooming out an image on the video display, if a current pixel width and height and width and height increment to be added are less than the maximum width  
5 and height that can be displayed, then calculating a new width and height as the current pixel width and height and width and height increment to be displayed and fixing an x and y position as fixed x and y center points minus any respective new width and height  
10 divided by two.

10. A method according to Claim 1, wherein if zooming in an image on the video display, if a current pixel width and height and width and height increment to be added are greater than the minimum  
5 width and height that can be displayed, then calculating a new width and height as the current pixel

width and height and width and height increment to be  
displayed and fixing an x and y position as fixed x and  
y center points minus any respective new width and  
10 height divided by two.

11. A method of scaling images continuously  
on a display comprising the steps of:

displaying video data generated as a video  
data stream on a video display at a predetermined  
5 aspect ratio;

during playback or in a pause mode, obtaining  
video x,y source values of pixel width and pixel height  
to be displayed;

designating a destination region on the  
10 display for displaying the video source values to be  
displayed;

determining the smallest integer increment on  
the x/y axis that will maintain the desired aspect  
ratio by using a greatest common denominator to reduce  
15 the ratio to the lowest integer; and

if the area of video source data does not  
correspond one-to-one with the area of the destination  
region, scaling the video source data in a graphics  
processor unit.

12. A method according to Claim 11, and  
further comprising the step of generating a video data  
stream from an optical disc player.

13. A method according to Claim 11, and  
further comprising the step of generating a video data  
stream as a High Definition Television (HDTV) signal.

14. A method according to Claim 11, and  
further comprising the step of manipulating a joystick

for initiating a zoom function to scale images of the video display.

15. A method according to Claim 14, and further comprising the step of moving the joystick up to increase zoom magnification by a predetermined number of pixels and moving the joystick down to  
5 decrease zoom magnification by a predetermined number of pixels until fully zoomed out.

16. A method according to Claim 15, and further comprising the step of manipulating a second joystick to vary the x/y position of the zoomed region in a continuous fashion.

17. A method according to Claim 11, and further comprising the step of displaying the video data on a video display that is operatively connected to a video game box containing an optical disc player,  
5 a central processing unit, a graphics processor unit, and game port.

18. A method according to Claim 11, and further comprising the step of processing the video data such that a zoomed rectangle retains its perspective in relation to the video source values to  
5 minimize jitter/"bob" effects.

19. A method according to Claim 11, wherein if zooming out an image on the video display, if a current pixel width and height and width and height increment to be added are less than the maximum width  
5 and height that can be displayed, then calculating a new width and height as the current pixel width and height and width and height increment to be displayed

and fixing an x and y position as fixed x and y center  
points minus any respective new width and height  
10 divided by two.

20. A method according to Claim 11, wherein  
if zooming in an image on the video display, if a  
current pixel width and height and width and height  
increment to be added are greater than the minimum  
5 width and height that can be displayed, then  
calculating a new width and height as the current pixel  
width and height and width and height increment to be  
displayed and fixing an x and y position as fixed x and  
y center points minus any respective new width and  
10 height divided by two.

21. A method of operating a video game  
comprising the steps of:

processing a video data stream as generated  
from an optical disc player and displaying video data  
5 on a video display at a predetermined aspect ratio;  
manipulating a game controller for  
continuously scaling images on the video display by  
obtaining video source values of pixel width  
and height to be displayed and determining the smallest  
10 integer increment on the x/y axis that will maintain  
the desired aspect ratio by using a greatest common  
denominator to reduce the ratio to the lowest integer  
in response to a predetermined manipulation of the game  
controller.

22. A method according to Claim 21, and  
further comprising the step of manipulating the game  
controller by manipulating a joystick.

23. A method according to Claim 22, and further comprising the step of moving the joystick up to increase zoom magnification by a predetermined number of pixels and moving the joystick down to  
5 decrease zoom magnification by a predetermined number of pixels until fully zoomed out.

24. A method according to Claim 22, and further comprising the step of manipulating a second joystick to vary the x/y position of the zoomed region in a continuous fashion.

25. A method according to Claim 21, and further comprising the step of displaying the video data on a video display that is operatively connected to a video game box containing the optical disc player,  
5 a central processing unit, a graphics processor unit, and game port.

26. A method according to Claim 21, and further comprising the step of processing the video data such that a zoomed rectangle retains its perspective in relation to the video source values to  
5 minimize jitter/"bob" effects.

27. A method according to Claim 21, wherein if zooming out an image on the video display, if a current pixel width and height and width and height increment to be added are less than the maximum width  
5 and height that can be displayed, then calculating a new width and height as the current pixel width and height and width and height increment to be displayed and fixing an x and y position as fixed x and y center points minus any respective new width and height  
10 divided by two.

28. A method according to Claim 21, wherein  
if zooming in an image on the video display, if a  
current pixel width and height and width and height  
increment to be added are greater than the minimum  
5 width and height that can be displayed, then  
calculating a new width and height as the current pixel  
width and height and width and height increment to be  
displayed and fixing an x and y position as fixed x and  
y center points minus any respective new width and  
10 height divided by two.

29. A method of operating a video game  
comprising the steps of:

processing a video data stream as generated  
from a DVD (digital versatile/video disc) player  
5 apparatus and displaying video data on a video display  
at a predetermined aspect ratio;

manipulating a game controller for  
continuously scaling images on the video display by the  
steps of

10 obtaining video x,y source values of  
pixel width and height to be displayed;

designating a destination region on the  
video display for displaying the video source  
values to be displayed;

15 determining the smallest integer  
increment on the x/y axis that will maintain  
the desired aspect ratio by using a greatest  
common denominator to reduce the ratio to the  
lowest integer; and

20 if the area of video source data does  
not correspond one-to-one with the area of

the destination region, scaling the video  
source data in a graphics processor unit.

30. A method according to Claim 29, and further comprising the step of manipulating the game controller by manipulating a joystick.

31. A method according to Claim 30, and further comprising the step of moving the joystick up to increase zoom magnification by a predetermined number of pixels and moving the joystick down to  
5 decrease zoom magnification by a predetermined number of pixels until fully zoomed out.

32. A method according to Claim 30, and further comprising the step of manipulating a second joystick to vary the x/y position of the zoomed region in a continuous fashion.

33. A method according to Claim 29, and further comprising the step of displaying the video data on a video display that is operatively connected to a video game box containing the DVD player, a  
5 central processing unit, a graphics processor unit, and game port.

34. A method according to Claim 29, and further comprising the step of processing the video data such a zoomed rectangle retains its perspective in relation to the entire source to minimize jitter/"bob"  
5 effects.

35. A method according to Claim 29, wherein if zooming out an image on the video display, if a current pixel width and height and width and height increment to be added are less than the maximum width  
5 and height that can be displayed, then calculating a



new width and height as the current pixel width and height and width and height increment to be displayed and fixing an x and y position as fixed x and y center points minus any respective new width and height  
5 divided by two.

36. A method according to Claim 29, wherein if zooming in an image on the video display, if a current pixel width and height and width and height increment to be added are greater than the minimum  
5 width and height that can be displayed, then calculating a new width and height as the current pixel width and height and width and height increment to be displayed and fixing an x and y position as fixed x and y center points minus any respective new width and  
10 height divided by two.

37. A video display system comprising:  
a central processing unit and associated graphics processor unit for processing a video data stream and generating video data to be displayed;  
5 a video display for receiving video data and displaying a video image at a predetermined aspect ratio;  
a user manipulable controller operative with said graphics processor unit for scaling images on the  
10 video display by obtaining video source values of pixel width and height to be displayed and determining the smallest integer increment on the x/y axis that will maintain the desired aspect ratio using a greatest common denominator to reduce the ratio to the lowest  
15 integer.

38. A video display system according to Claim 37, wherein said video display comprises a television.

39. A video display system according to Claim 37, and further comprising an optical disc reader, including a DVD (digital versatile/video disc) player, for producing said video data stream.

40. A video display system according to Claim 37, wherein said video data stream comprises a high definition television (HDTV) signal.

41. A video display system according to Claim 37, wherein said user manipulable controller comprises a joystick.

42. A video display system comprising:  
a central processing unit and associated graphics processor unit for processing a video data stream and generating video data to be displayed;

5 a video display for receiving video data and displaying a video image at a predetermined aspect ratio;

a user manipulable controller operative with said graphics processor unit for scaling images on the  
10 video display by obtaining video x,y source values of pixel width and height to be displayed;

designating a destination region on the display for displaying the video source values to be displayed;

15 determining the smallest integer increment on the x/y axis that will maintain the desired aspect ratio by using a greatest common denominator to reduce the ratio to the lowest integer; and

if the area of video source data does not  
20 correspond one-to-one with the area of the destination  
region, scaling the video source data in a graphics  
processor unit.

43. A video display system according to  
Claim 42, wherein said video display comprises a  
television.

44. A video display system according to  
Claim 42, and further comprising an optical disc  
reader, including a DVD (digital versatile/video disc)  
player, for producing said video data stream.

45. A video display system according to  
Claim 42, wherein said video data stream comprises a  
high definition television (HDTV) signal.

46. A video display system according to  
Claim 42, wherein said user manipulable controller  
comprises a joystick.